

STATUS 15 Jan 2016: FINAL!

Analysis of Different Drug Policy Approaches and Consequences

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Abstract

In this chapter drug laws and policies and their consequences are considered. Two important reports were released by the Global Commission on Drug Policy in 2014 and in 2016. In 2014, the Commission calls for an end to the criminalisation of drug users and proposes the legal regulation of *responsible* drug use. The 2016 report title is “advancing drug policy reform: a new approach to decriminalization”, following the 2014 proposal and dealing with it in depth.

Punitive drug laws have been frequently considered the most effective deterrent against drug use. This idea is not supported by evidence, since incidence studies have shown that worldwide consumption follows epidemic dynamics. Moreover, like any public intervention, prohibitionist drug policy approaches may have unintended, undesirable consequences and the overall outcome can be negative.

The regulation schemes in producing and consuming countries are analysed. It is worth noting that, in consuming countries, a general ‘prohibitionist’ approach is nonetheless applied in different ways.

According to the 2010 Prague Declaration (www.praguedeclaration.com), an unbiased analysis of costs and benefits arising from different policy approaches and forms of intervention is required.

Further considerations derive from the EU project JUST/2010/DPIP/AG/1410, "New methodological tools for policy and programme evaluation," which has developed many indicators and a ‘corruption index’. This turns out to be approximately proportional to the amount of drug money in the economy; corruption strongly influences country competitiveness.

Based on the consideration that innovative approaches have been recently implemented for cannabis in various countries, similar approaches might be adopted to regulate cocaine.

Keywords: Drug policies, unintended consequences, health indicators, drug trafficking and corruption, evidence based policies

Introduction

The Global Commission on Drug Policy released an important report in September 2014. In the report the Commission calls for an end to the criminalisation of drug users and responsible legal regulation of drugs.

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The report title is “Taking Control: Pathways to Drug Policies that Work”, and it provides a global descriptive analysis of the negative consequences deriving from the present laws and policies that need to be urgently changed, as pointed out in the foreword by the Chair:

“We are driven by a sense of urgency. There is a widespread acknowledgment that the current system is not working, but also recognition that change is both necessary and achievable. We are convinced that the 2016 United Nations General Assembly Special Session (UNGASS) is an historic opportunity to discuss the shortcomings of the drug control regime, identify workable alternatives and align the debate with ongoing debates on the post-2015 development agenda and human rights.”

Fernando Henrique Cardoso

Former President of Brazil (1994-2002)

The Global Commission on Drug Policy released a further report in 2016 “Advancing Drug Policy Reform: a new Approach to Decriminalization” and the forward by the Chair synthetically explains the aims:

“This report builds on those we have published previously. It highlights the damage caused through the criminalization of people who use drugs and explores the alternatives to this approach. It welcomes the moves made towards more rational and humane policies in many countries around the world and shows the necessity to go further in reforming national and international drug control regimes. The Global Commission on Drug Policy is calling not only on governments and the United Nations, but also on the public, to change their perception of drug users and rid themselves of their prejudices. People who use drugs have to be recognized as equal and responsible members of society, in their full rights and dignity.

As long as drugs are considered as evil, and thereby criminalized, they will remain in criminal hands. Because they are potentially harmful they must be regulated by responsible governments, who are in charge of the well-being of their population. Exploring models of regulated production and markets is necessary and these experiences have to be scientifically monitored and the results made available. It is time for States to assume their full responsibility and to remove drugs from the hands of organized crime. It is time to take control.”

Ruth Dreifuss

Former President of Switzerland

and Minister of Home Affairs

In all areas of public policy, interventions designed to achieve a specific goal may have unpredictable (or not well forecasted) effects. Some of these unintended consequences may be rather undesirable and the global outcome more negative than positive. This is true of prohibitionist drug law and policy approaches.

As described in the previous **Chapter 1**, the main indicators to measure demand reduction intervention effectiveness are drug use (epidemic) prevalence and incidence. More specific indicators, measuring the policy results with respect to public health and criminality, are based on the health and criminal consequences of the behaviour of consumers, influenced by law and policy. Incidence studies have shown that consumption trends have epidemic dynamics, not influenced by present policy interventions (Figure 1 in **Chapter 1**). Thus, standard demand and supply interventions directed towards dealers, users and non-users are generally not effective, particularly if they do not allow for consumer rehabilitation and behaviour modification. This ineffectiveness is a consequence of current drug laws and policies that consider cocaine as an illegal substance, pushing heavy cocaine users towards criminal activities, including substance dealing, but also many other illegal activities, to get the necessary money to consume cocaine and, at the same time, providing organised crime with an extremely profitable trade. These laws and policies also seem to allow drug traffickers to extend their influence and increase their profit. It is clear from the study of supply routes and the evolution of new markets – in countries that previously had low prevalence of use – that traffickers expand the market by conquering new areas whenever the already conquered territories show epidemic plateaus among consumers. Up to now, this strategy has been extremely successful. Examples of the deployment of this strategy can be seen in Figures 8-14, of **Chapter 1**.

Some examples of drug laws and policies correctly evaluated in terms of their negative and positive consequences

The enforcement of overly punitive laws for drug offences has not only proven ineffective in reducing the production, trafficking and consumption of illicit substances, but has shown many negative consequences, including overloading criminal justice systems, fuelling prison overcrowding and exacerbating negative health impacts.

US Anti-Drug Abuse Act of 1986 (historic example)

Unfortunately, important politicians regularly subscribe to the appealing rhetoric of 'zero tolerance' and creating 'drug-free' societies rather than using an informed approach based on evidence. For example, after bouncing back and forth between the Democratic-controlled House and the Republican-controlled Senate, as each party jockeyed for political advantage, the Anti-Drug Abuse Act of 1986 finally passed both houses a few weeks before the November elections.

This federal law, with mandatory minimum sentences for drug crimes based on the amount of drugs involved, had no impact on cocaine epidemics, as can be seen in Figure 1 of **Chapter 1**. It also had no other positive results. Table 1 below shows the mandatory minimum sentences for quantities of different substances. In a case involving a charge that carries a mandatory minimum sentence, a judge cannot impose a sentence below that minimum, except if requested by the Justice Department. This exception arises when the government says that a drug offender has given "substantial assistance" to the government for the prosecution of another drug offender. One of the common ways for the Justice Department to get testimony in drug cases is to offer to some drug offenders the possibility of a more lenient sentence if they testify against other drug offenders.

In 1988, Congress passed another pre-election Anti-Drug Law. One of the provisions was urged by the Department of Justice to simply close a little loophole. The change was to apply the mandatory sentences intended for high-level traffickers in the 1986 law to anyone who was a member of a drug trafficking conspiracy. The effect of this amendment was to make everyone in a conspiracy liable for every act of the conspiracy. Within six years, the number of drug cases in federal prisons increased by 300%. From 1986 to 1998 it was up by 450%.

One result of the conspiracy amendment is that low-level traffickers can get very long sentences. They can also be the victims of lies by co-defendants who have figured out how to cut a deal and manipulate the sentencing laws to their advantage.

Table 1. Mandatory minimum sentences for first time drug offenders set by the Anti-Drug Abuse Act

Type of drug	Five Year Sentence Without Parole	Ten Year Sentence Without Parole
LSD	1 gram	10 grams
Marijuana	100 plants/100 kilos	1000 plants/1000 kilos
Crack cocaine	5 grams	50 grams
Powder cocaine	500 grams	5 kilos
Heroin	100 grams	1 kilo
Methamphetamine	10 grams	100 grams
PCP	10 grams	100 grams

Source: Sterling 1999

A drug offender, while in jail awaiting trial, may learn the names of other persons awaiting trial. He may learn that he can easily make up a story that will get him out of prison fairly soon if his story provides "substantial assistance" in the prosecution of someone else as a "high-level trafficker". A clever informant can prove that someone else is a "high-level trafficker" without too much trouble. This legally-incentivised snitching has many negative consequences on the general population of consumers and non-consumers alike, as well on the legal system (Sterling 1999).

Some quantitative evaluation is also available. In Friedman et al. (2006, 2011), specific data analyses can be found to understand associations between punitive policies and incarcerations and the population prevalence of injection drug users (IDUs) and HIV seroprevalence among injectors, for heroin as well as cocaine users. Estimates of drug injector prevalence and of HIV seroprevalence among injectors in 89 large US metropolitan areas were regressed (correlated) on three measures of legal repressiveness (hard drug arrests per capita; police employees per capita; and corrections expenditures per capita). All three measures of legal repressiveness were positively associated with HIV prevalence among injectors.

In particular, hard drug-related arrest rates were positively associated with the population rate of IDUs. Increased arrests were also associated with less reduction in mortality among IDUs with AIDS – and thus with more deaths.

These findings suggest that legal repressiveness may have little deterrent effect on drug injection and a high cost in terms of HIV and perhaps other diseases among injectors and their partners. They also indicate that alternative methods of maintaining social order should be investigated, such as harm reduction, which prevents HIV transmission, increases referrals to treatment is a better foundation for drug policy (Friedman et al. 2006, 2011). Such considerations also appear in the Global Commission on Drug Policy 2016 report.

Drug laws in Italy, Portugal and the Czech Republic (apparently similar laws regarding drug users but different regarding substance classification and overall policy approach)¹

Other countries have also introduced restrictive modifications of their drug laws, aiming for political advantage. One such European country is Italy: in 2006, just before national elections, the less repressive law was changed into a more repressive one, causing quite negative consequences, in particular among young people starting substance use². In order to better understand this point, an important new indicator can be used to compare the three countries and to evaluate and measure the negative consequences of harder repression, in particular for substance dealing. We will first summarise the three countries' laws, which are described in more detail in Ventura and Rossi (2013) and Ventura et al. (2015).

Italy (2006-2014)

Law 49 of 21 February 2006, known as the Fini-Giovanardi Law, amended the previous legislation by increasing sanctions and restrictions on drug use. The passing of the law was controversial in itself due to its insertion in the legislative Act preparing for the Winter Olympic Games in Turin. The legislation was inspired by the 'zero tolerance' approach, which has shown itself ineffective in many previous and diverse circumstances. Foremost was the abolition of any distinction between soft drugs and hard ones. The legislation represented a view of the drug user as a criminal rather than as a patient, although personal possession was not criminalised. Restriction through the threat of penalisation is emphasised over harm reduction and rehabilitation. Implicit in the problem of incarcerating Italian drug users is the issue of overcrowded prisons in the country (EMCDDA 2013).

Portugal

Since 1 July 2001, the possession of any drug for personal use without authorisation is an administrative issue rather than a criminal one. Emphasis is placed on education and treatment rather than restriction. 'Dissuasion Commissions' are an institutional framework which facilitates the evaluation and treatment of users, instead of imprisoning them. When an individual is found in possession of no more than 10 daily doses of drugs and is not under suspicion of supply offences, his or her case will be transmitted to the Commission for the Dissuasion of Drug Abuse (CDT), where it will be determined whether the person is an occasional or dependent user, or a dealer. Various sanctions may occur, ranging from warnings to forfeiture of professional and firearms licences. Possession of more than 10 daily doses or being charged with selling drugs means the individual will be sent to the criminal court. The 2001 legislation was an outgrowth of the recommendation for decriminalisation of both 'hard' and 'soft' drug possession and use by a government-appointed committee in 1998, the Commission for the National Strategy to Combat Drugs. Portugal has a history of viewing drug consumption as a health issue, and this has fostered a policy that focuses on treatment rather than restriction.

¹ Portugal and Czech Republic are explicitly mentioned in the Global Commission on Drug Policy 2016 report as two countries with rather effective drug policy.

² In 2014 the Constitutional Court declared not valid such law and the previous one entered into force again.

Czech Republic

The Czech Republic has the most liberal legislation in Europe in terms of the variety and quantity of substances allowed. On 1 January 2010, substances from marijuana to cocaine, ecstasy and heroin were decriminalised in small quantities. Further reforms since then have empowered judges to consider addiction and other circumstances regarding the offender in order to impose sentences alternative to imprisonment, such as treatment. Drug addiction is seen as a public health rather than criminal problem.

The strategy employed is comprehensive and is based on four pillars: prevention, treatment and reintegration, harm reduction, and supply reduction. The harshest sanctions are directed at drug trafficking through organised crime. Membership of an organisation is considered an aggravating circumstance for trafficking convictions.

All three laws decriminalise consumption. Supply reduction aspects of the laws are quite different, but are generally not taken into account when discussing and evaluating demand reduction interventions. However, demand is highly influenced by supply, as can be shown by comparing cocaine consumption among sixteen-year-old students in different countries (Mammone et al. 2014).

It is worth reporting the results of a comparison using the new Poly-Drug Score (PDS) indicator (Fabi et al. 2014), based on van Amsterdam et al. (2010) toxicological substance scores, which measures the health consequences of poly-drug use: the higher the value of the indicator, the higher the frequency of use and the dangerousness of the substances used and/or poly-drug use.

Using the 2011 data base of the European School Survey Project on Alcohol and Other Drugs (ESPAD), the lifetime prevalence of drug use among sixteen-year-old students in 38 countries can be estimated³. The lifetime prevalence of use of any drug is shown in Figure 1. It can be seen that the prevalence in Portugal is lower than in Italy, whereas in the Czech Republic it is much higher (the highest among the 38 countries). However, considering only prevalence to evaluate the consequences of drug policy may result in a quite rough and biased judgment.

If we calculate the new PDS indicator in the three countries, we get, as mean values, PDS=0.44 for Italy, PDS=0.18 for Portugal and PDS=0.17 for the Czech Republic. This means that less harmful behaviour among sixteen-year-old students can be observed in the less restrictive countries (Portugal and Czech Republic). In Italy, indeed, the PDS indicator is the highest, as the median, of the 38 countries, as reported in Table 2 (where Portugal is 16th and Czech Republic 26th).

Thus, prevalence alone cannot be used to measure the effects of drug laws and policies. New drug use trends need new indicators.

Similar comparisons based on other data provide similar conclusions regarding the evaluation of the drug laws and policies in the three countries (Fabi et al. 2014). This can be seen, for example, in Table 3, where the mean age of problem drug users (PDUs) assisted by services are reported for Italy and the Czech Republic.

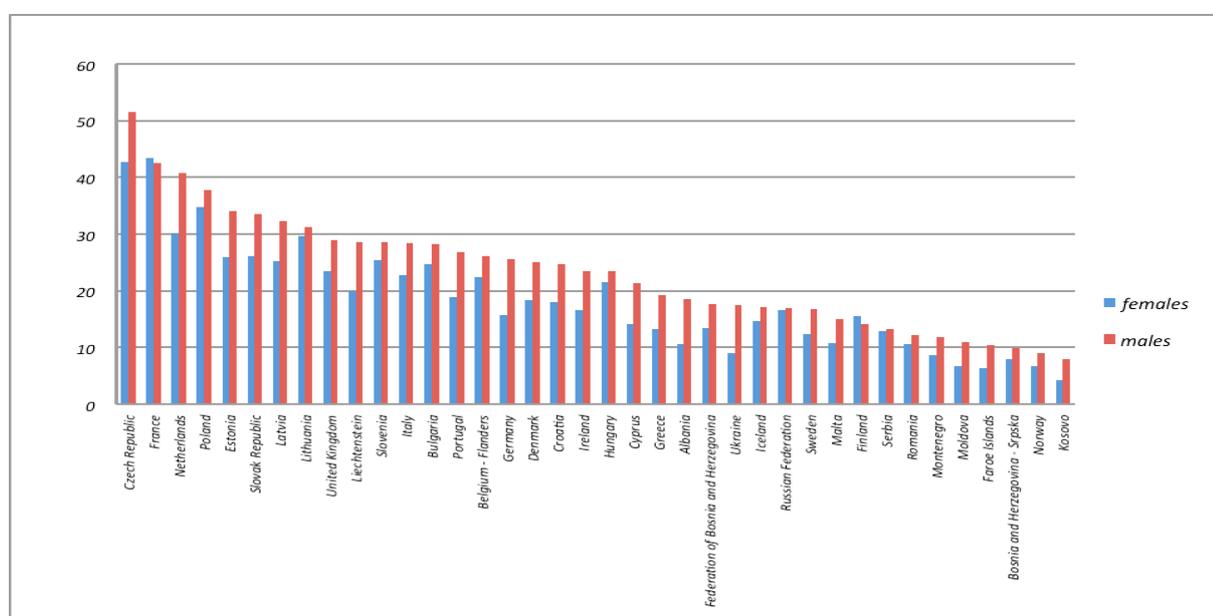
It is clear that the approach of the Czech Republic, where harm reduction is a priority, is more effective in reducing negative consequences by emphasising therapy and rehabilitation. In Italy, in contrast, harm reduction is not a priority and furthermore is poorly implemented. It would be quite interesting and useful to further analyse the impact of prevention and harm reduction interventions

³ Work is in progress on new ESPAD data of 2015 survey.

in countries such as the Czech Republic that show good outcomes on, for example, healthier behaviour by users.

A significant body of research on cocaine users, recruited outside what is traditionally conceived as the 'drug dependent population', has been carried out in many European countries and outside Europe. These studies show a large variety of patterns and life histories of use other than 'addictive' use. This kind of behaviour is facilitated in countries where harm reduction is a pillar of drug policy, as in the Czech Republic and Portugal (as opposed to Italy), and is known as the 'self-regulation model'. This model is embedded in harm reduction, while taking some of its cornerstones in new directions. It can innovate drug services as well as drug policies, shifting the main purpose away from 'elimination' to 'regulation' of drug use, with the aim of creating and strengthening users' informal controls while reducing the harms of punitive laws and policies (Zuffa and Ronconi 2015).

Figure 1. Lifetime prevalence of drug use (%) among sixteen-year-old students, by gender



Source: ESPAD 2011 sample

Another crucial point differentiating Italy from most other countries and, in particular, from Portugal and the Czech Republic, was the abolition in 2006 (until 2014) of any distinction between soft drugs and hard ones for dealers and for consumers. This had the 'unintended' – but expected – consequence of increasing poly-drug dealing, which extended poly-drug use, in particular among young people (Table 2).

The Italian data about poly-drug dealing are reported in more detail in Mascioli and Rossi (2015). Here, the difference between Italy and other countries is illustrated by Figure 2, obtained from a survey aimed at estimating the drug market, conducted on behalf of the European Commission (Trautman et al. 2013). In the other countries, the lower penalties for dealing cannabis and other soft drugs imply rather different markets for soft and hard drugs, encouraging the use of soft drugs, in particular among young people, as historically happened in the Netherlands for specific reasons (Ventura and Rossi 2013).

In Italy, poly-drug dealing started to increase as soon as the Fini-Giovanardi law was launched, as shown in Figure 3. Also the number of dealers increased by 10% from 2005 to 2009 (Mascioli and

Rossi 2015) and continued to increase until 2014 (Relazione annuale al Parlamento sullo stato delle tossicodipendenze in Italia 2015).

Table 2. Country poly-drug scores (PDS) (median, mean), ordered by median value

Country	PDS	
	Median	Mean
Italy	0.27	0.44
Federation of Bosnia and Herzegovina	0.19	0.44
Albania	0.12	0.46
France	0.08	0.24
United Kingdom	0.08	0.23
Netherlands	0.08	0.23
Moldova	0.08	0.12
Cyprus	0.07	0.34
Belgium - Flanders	0.07	0.21
Montenegro	0.05	0.3
Iceland	0.05	0.26
Malta	0.05	0.24
Bulgaria	0.05	0.21
Slovenia	0.05	0.2
Germany	0.05	0.19
Portugal	0.05	0.18
Liechtenstein	0.04	0.27
Ireland	0.04	0.24
Russian Federation	0.04	0.2
Hungary	0.04	0.2
Croatia	0.04	0.18
Denmark	0.04	0.17
Latvia	0.04	0.17
Slovak Republic	0.04	0.17
Poland	0.04	0.17
Czech Republic	0.04	0.17
Norway	0.04	0.16
Sweden	0.04	0.16
Ukraine	0.04	0.15
Finland	0.04	0.14
Romania	0.04	0.13
Estonia	0.04	0.12
Faroe Islands	0.04	0.07
Serbia	0.03	0.19
Greece	0.03	0.17
Kosovo	0.03	0.15
Lithuania	0.03	0.13
Bosnia and Herzegovina - Srpska	0.02	0.15

Source: Mammone et al. 2014

Poly-drug dealing and, in particular, the availability of cocaine among cannabis dealers is a possible cause of the higher percentage of cocaine users among sixteen-year-olds in Italy, compared to Portugal and the Czech Republic. In this comparison, it is interesting to observe that Portugal is on the main cocaine trafficking route to Europe while Italy is not. Another analysis that leads to similar considerations has been conducted recently by using the same consumer data as in Trautman et al. (2013).

Thus, it can be concluded that the Italian drug law (2006-2014) facilitated the expansion of the cocaine market, poly-drug dealing and poly-drug use.

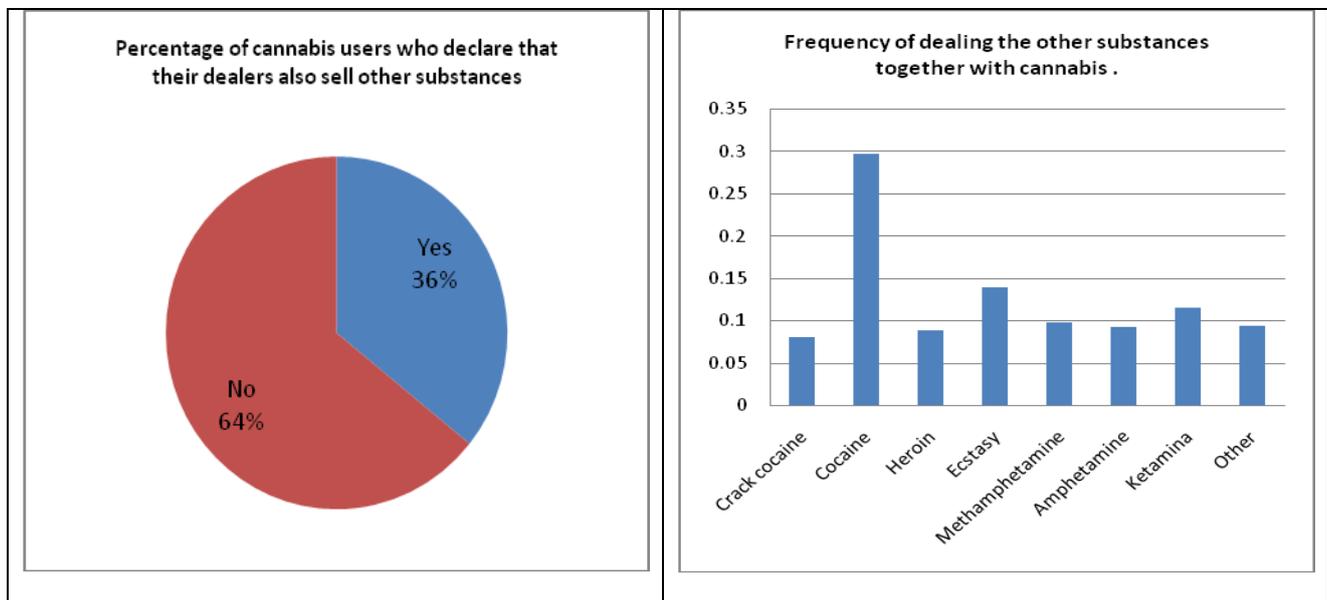
In other words, the conclusions provided by Solivetti (2001) are still valid and can even be strengthened. In particular, the more repressive Fini-Giovanardi drug law did not result in curbing the spread of drugs; on the contrary, it increased with a measurable impact on poly-drug dealing and poly-drug use.

Table 3. Mean age of PDUs assisted in the services in Italy and the Czech Republic in 2012

	Italy		Czech Republic	
	Male	Female	Male	Female
Mean age	36.18	35.36	30.47	27.21

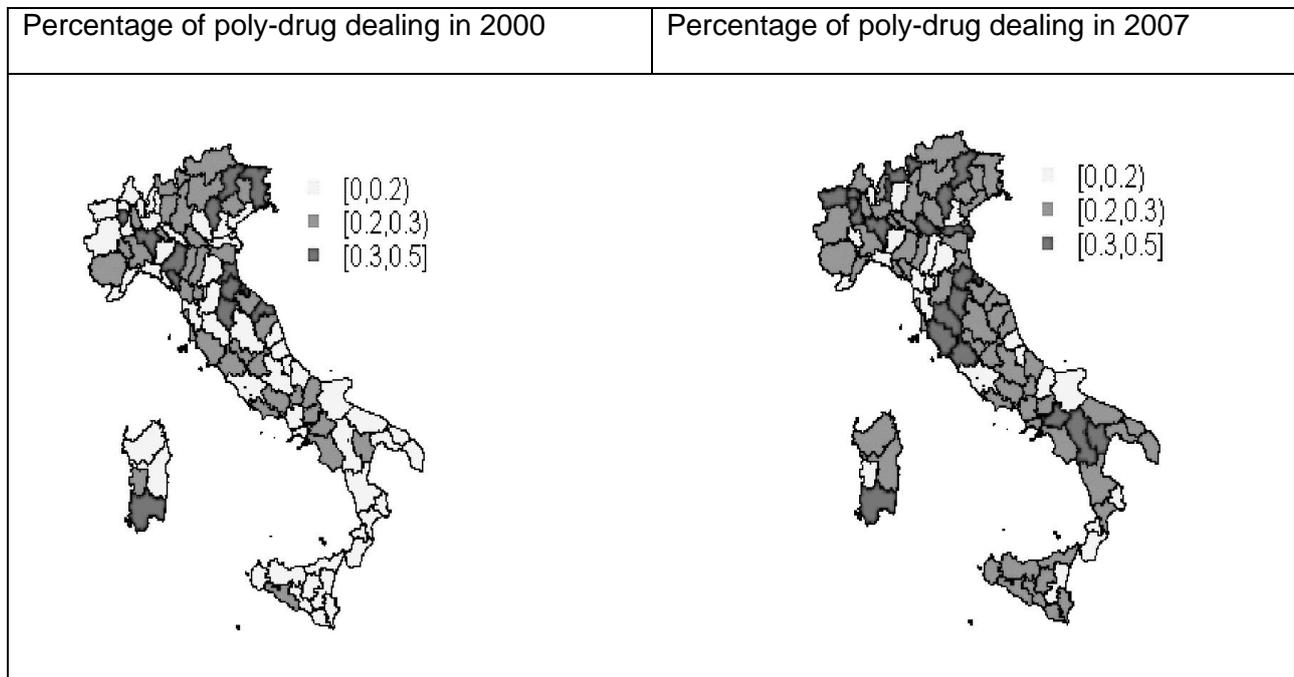
Source: Mammone et al. 2014

Figure 2. Poly-drug dealing according to declaration of Italian cannabis users



Source: Mascioli and Rossi 2015

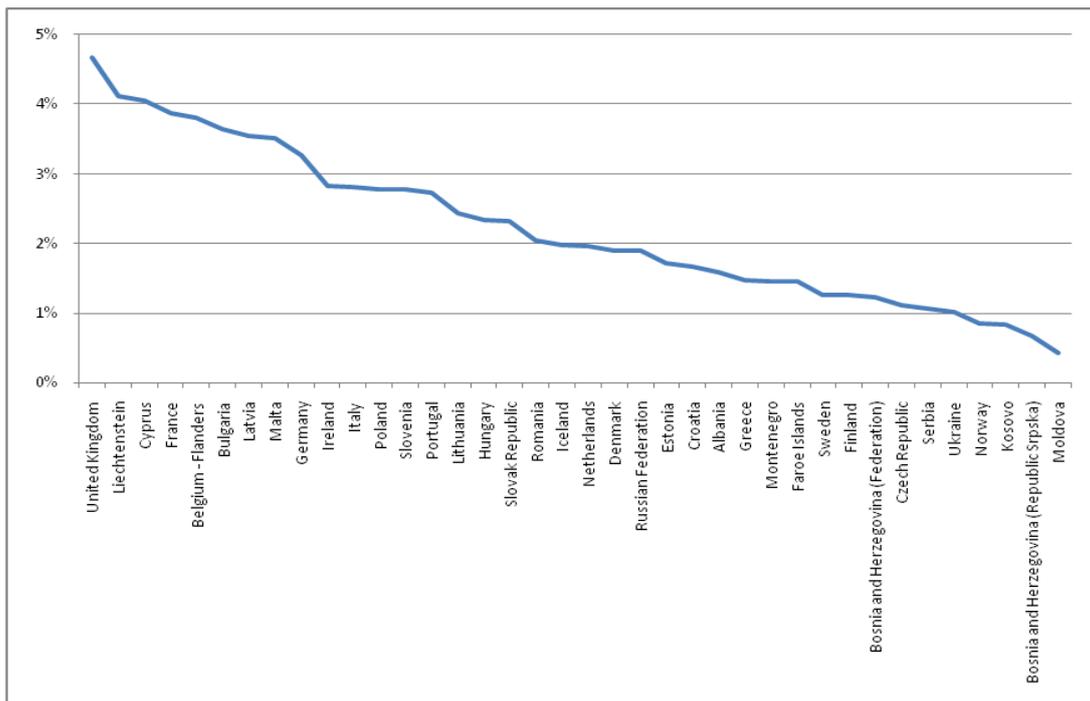
Figure 3. Poly-drug dealers in police data base for Italian provinces before and after the Fini-Giovanardi drug law



Source: Mascioli and Rossi 2015

By studying the prevalence of sixteen-year-old student cocaine users in the 2011 ESPAD data (Figure 4), the importance of the supply side in combination with local drug policy can also be seen.

Figure 4. Lifetime cocaine prevalence among sixteen-year-olds at school in 38 ESPAD project countries, 2011



Source: Mammone et al. 2014

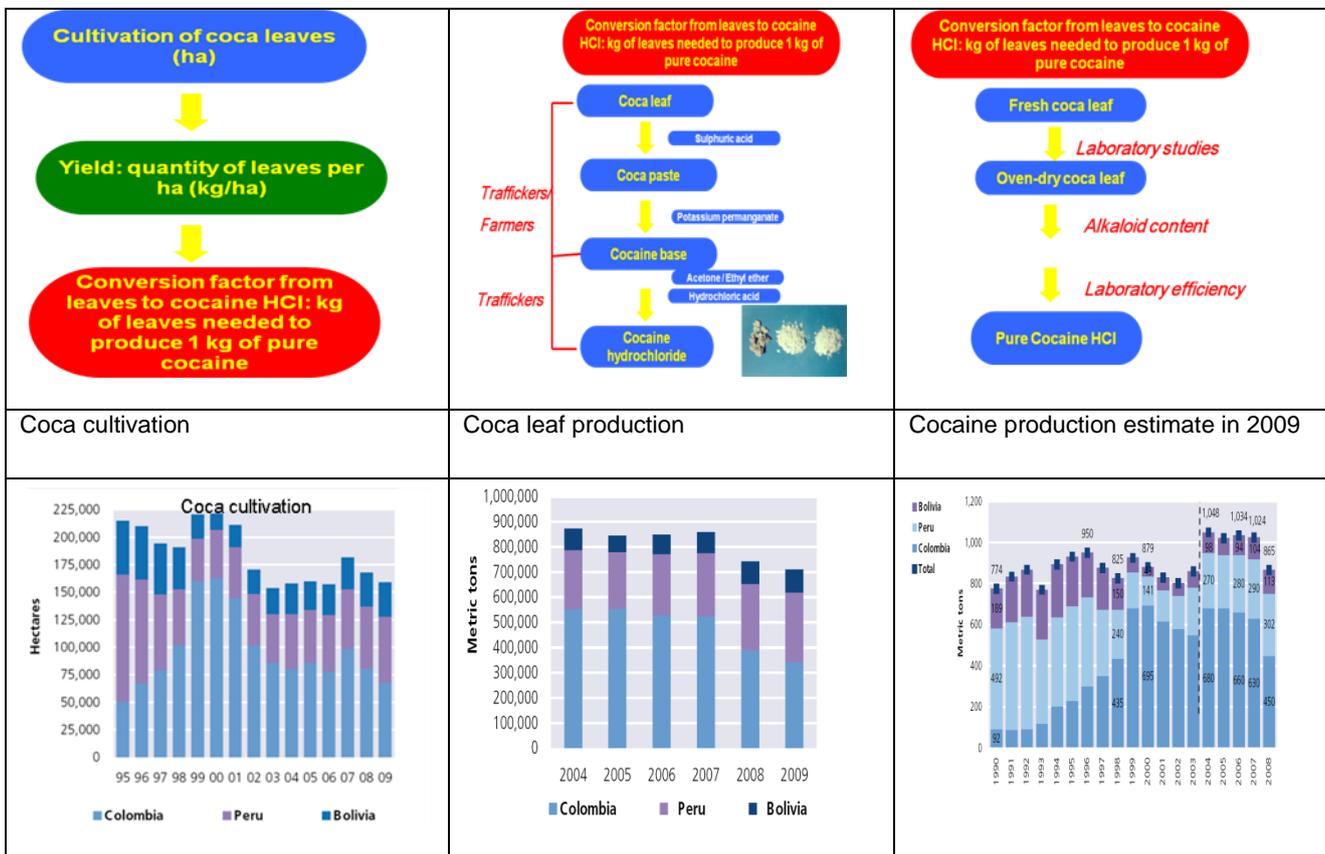
As the above graph shows, the United Kingdom has the highest prevalence and the UK also lies on the main cocaine trafficking route from South America to Europe, unfortunately Spain is not in ESPAD project. Portugal is also an EU harbour for the main cocaine trafficking route, but the prevalence is much lower (about half). The drug law in Portugal has been the least restrictive law in Europe since 2000 and the local policy is coherent with this approach, as explained above.

General considerations about approaches to drug laws and policies during the last 50 years in the world

In the debate about prohibition (or legalisation), the unintended consequences of restrictive enforcement policies must be considered. They are highly significant – in a negative sense – for the drug using population, as shown above, but also for all citizens, for example by creating huge criminal parallel markets with all the further consequences of this criminal activity.

In Colombia, approximately 2.6 million acres of land were aerially sprayed with toxic chemicals as part of drug crop eradication efforts (the ‘war on drugs’) between 2000 and 2007. Despite the destructive impact on livelihoods and land, the number of locations used for illicit coca cultivation actually increased during that period. These interventions were not very successful regarding coca production either, as coca cultivation, even if reduced in terms of hectares, has been estimated to have led to higher cocaine production, as explained in Figure 5. This means that the criminal organisations that invest in drug (cocaine) trafficking aim to expand the market whatever restrictive laws imply in terms of drug supply and demand interventions.

Figure 5. Estimated cocaine production potential

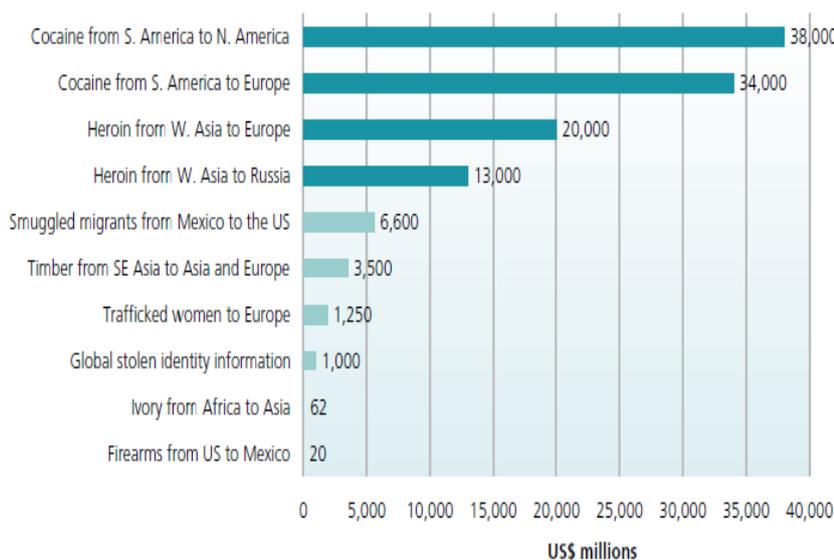


Source: UNODC. Presentation by Sandeep Chawla and Angela Me, "Challenges in estimating the production of pure cocaine HCl," at the EU Conference "Improving responses to organised crime and drug trafficking along the cocaine route," Rome, 28-30 May 2013.

The UNODC estimates the value of the transnational cocaine trade at US\$88 billion per year, also stressing that this trade is the most important of all illegal trades in terms of revenue and profits (Figure 6 a). Figure 6 b, derived from Transform website (<http://www.tdpf.org.uk/case-for-reform>), shows how the price of cocaine is inflated through the illicit drug market.

Most of the proceeds from drug trafficking are re-invested in the same activity, but also in the legal economy. The proceeds invested in the legal economy have consequences ranging from the distortion of investment and prices to unfair competition and the weakening of institutions. Besides the direct economic consequences of drug trafficking, one must also consider the burden and costs of increased health problems, violence and corruption.

Figure 6 a. Estimated illicit financial flows from drug trafficking and other transnational organised crimes, 2008



Source: UNODC: http://www.unodc.org/documents/data-and-analysis/Studies/Illicit_financial_flows_2011_web.pdf

Figure 6 b. How the price of cocaine is inflated through the illicit drug market



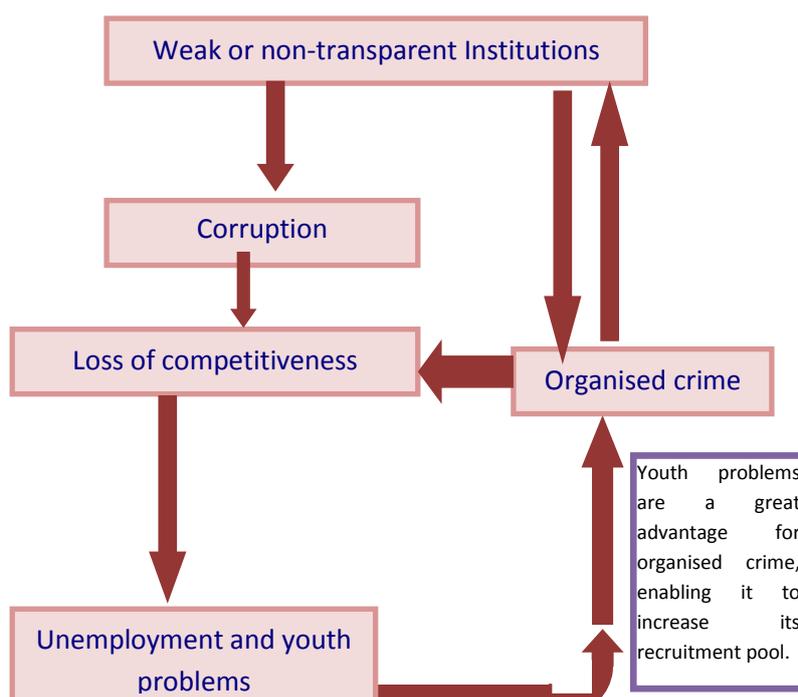


In fact, the laundering of illegally obtained money and its subsequent entry into the legal economy cannot happen without connivance or at least carelessness at the institutional level and this complicity is obtained through corruption. As well as promoting organised crime directly, corruption also favours it indirectly through a reduction in meritocracy and, therefore, competitiveness. This in turn generates unemployment and youth problems, which are likewise functional to organised crime, resulting in the perverse circuit shown in Figure 7.

As part of the EU project JUST/2010/DPIP/AG/1410, New methodological tools for policy and programme evaluation (www.drugpolicyevaluation.eu), the transparency index provided by Transparency International (<http://www.transparency.org/surveys/index.html#cpi>) was compared with the proceeds from drug markets (Table 4). In the extensive analysis by Caserta and Rossi (2013), the correlation between the two values was explored and is shown to be very high (correlation coefficient=0.99, where the maximum possible value is 1). This means that the corruption index is almost proportional to drug money and that negative consequences for country populations are proportional to the local illegal drug markets, with influences also on corruption and competitiveness, as shown below in Figure 7.

Since 1999, the level of competitiveness has been evaluated yearly by the World Economic Forum, which publishes a detailed yearly report, the “Global Competitiveness Report” (available on the WEF website: <http://www.weforum.org/issues/global-competitiveness>).

Figure 7. Diagram of how the perverse cycle "weakness of institutions - loss of competitiveness" works



Source: Caserta and Rossi 2013

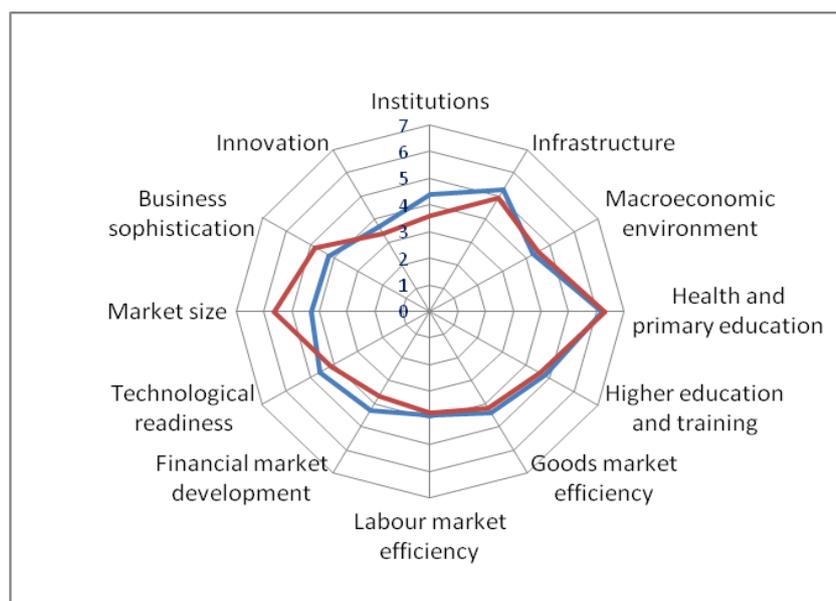
Table 4. Estimated proceeds from drug trafficking and trade in six countries in certain years and the corruption index for the same years

Country	Year study of	Proceeds from drugs in billion US\$	Proceeds from drugs per million inhabitants	Corruption index=10-Transparency index
United States	2000	64	0.21	2.2
United Kingdom	2004	8.4	0.14	1.4
Australia	2003	1.5	0.07	1.2
Netherlands	2003	2.07	0.12	1.1
Germany	2008	13.8	0.17	2.1
Italy	2010	31.58	0.53	6.1

Source: Caserta and Rossi 2013

If we consider two previously discussed and compared countries, Italy and Portugal, the relation between the transparency index and competitiveness can be looked at in some detail. The transparency indexes (maximum possible value 10) are Italy -- Transparency index=3.9, Portugal -- Transparency index=6, about 50% higher than Italy. Competitiveness can be compared in detail by a radar graph (Figure 8). Even if Portugal is a much smaller country, it shows generally higher competitiveness than Italy, except in two items more linked to the size of the countries. In particular, infrastructure, institutions, innovation, technological readiness and financial market development score better in Portugal than in Italy.

Figure 8. Comparison of competitiveness of Portugal (blue) and Italy (red) in various aspects



Source: Caserta and Rossi 2013

If the correlation between transparency and competitiveness indexes in the world is explored, a very high correlation=0.91 is found. Similar up-dated results for Europe have been obtained in 2016 (Caserta and Rossi, 2016).

This means that competitiveness is more or less proportional to transparency, thus less corruption implies higher well-being for the general population, and this aspect is negatively correlated with drug money. Thus, drug laws and policies which are based on ideology and not on scientific evidence, promoting -- albeit unintentionally -- the interests of criminal organisations in drug markets, should be revised urgently. The quantitative analyses suggest that a more efficient and less repressive drug law approach improves many outcomes and reduces negative consequences.

Drug laws and policies promising positive outcomes

A starting point to conclude this chapter must be the acknowledgement that prohibition is counterproductive, bearing in mind rising global drug consumption and all the other negative aspects of the phenomenon, as exemplified above and in Chapter 1 quantitatively, as qualitatively in both report 2014 and 2016 of the Global Commission on Drug Policy. It creates the vast profit margins that sustain the illegal trade and enriches organised crime groups responsible for undermining peace, security, transparency and competitiveness around the globe.

If progress is to be made in the future, drug policy-related harms must be prevented and reduced. A key endeavour for states is to ensure that unachievable goals such as a 'drug-free world' are abandoned. Rather, their focus must be on ensuring pragmatic goals, targets and indicators that prioritise the safety, health and human rights of all people, as explicitly stated in 2010 at the Prague Conference on Urban Drug Policies in the Globalised World.

These considerations are also made, and clearly explained, in the 2014 document "Debating Drugs: How to Make the Case for Legal Regulation" by the Transform Drug Policy Foundation. Other interesting documents on drug policy are available on the TDPF website.

Quoting from the preface of the "Debating Drugs" document:

This is a guide to making the case for the legal regulation of drugs from a position of confidence and authority. Organised into 12 key subject areas, it provides an at-a-glance summary of the arguments for legal regulation, followed by commonly heard concerns and effective responses to them. (...)

(...) ‘Legalisation’ is merely a process – namely, of making an illegal drug legal – but ‘legal regulation’ refers to the end point of this process: the controls that will be put in place on the production, supply and use of the drug once it has been legalised. (...)

It is also useful to explain what motivates those who support legal regulation. Transform, along with most other reform advocates, propose that drug policy should:

- *protect the young and vulnerable;*
- *reduce crime;*
- *improve health;*
- *promote security and development;*
- *provide good value for money;*
- *and protect human rights.*

As a general conclusion, all the national policies analysed above fail to achieve some of the very reasonable aims stated above. Even the Portugal and Czech Republic drug laws, while tending to achieve the first points on the list, do not succeed in preventing the flow of income from drugs to criminal organisations. At the very least, this has negative effects regarding the points *promote security and development* and *provide good value for money*, since drug supply remains in the hands of criminal organisations, as recognised also by police from The Netherlands⁴ at the 2010 Conference on Urban Drug Policies in Prague⁵

Going back to the “Debating Drugs” document (Kushlick et al. 2014), we find a quite interesting summary of possible models of legal regulation for various kinds of substances:

- *Prescription – The riskiest drugs, such as injectable heroin, are prescribed to people who are registered as dependent on drugs by a qualified and licensed medical practitioner. This model can also include extra tiers of regulation, such as the requirement that drug consumption take place in a supervised medical venue.*
- *Pharmacy – Licensed medical professionals serve as gatekeepers to a range of drugs – such as amphetamines or MDMA – dispensing rationed quantities to people who wish to use them. Additional controls, such as licensing of purchasers, could also be implemented.*
- *Licensed sales – Licensed outlets sell lower-risk drugs at prices determined by a regulatory authority, in accordance with strict licensing conditions, such as a ban on all forms of advertising and promotion, no sales of non-drug products, no sales to minors, and health and safety information on product packaging.*
- *Licensed premises – Similar to pubs, bars, or cannabis ‘coffee shops’, licensed premises can sell lower-risk drugs for on-site consumption, subject to strict licensing conditions*

⁴ <http://www.urbandrugpolicy.com/en/catalogue/detail/6/155/>.

⁵ <http://www.urbandrugpolicy.com/en/catalogue/detail/4/2/>.

similar to those for licensed sales, described above. Additional regulation, such as partial vendor liability for customers' behaviour, may also be enforced.

- *Unlicensed sales – Drugs of sufficiently low risk, such as coffee or coca tea, require little or no licensing, with regulation needed only to ensure that appropriate production practices and trading standards are followed, and that product descriptions and labelling (which includes use-by dates and ingredient lists) are accurate.*

At this point, two examples of countries that early (Switzerland) and recently (Uruguay) adopted two different approaches for two different substances are of interest.

Switzerland (prescription): In the 1980s, Switzerland was faced with a growing public health crisis relating to injecting heroin use. Rather than resort to failed punitive responses, the Swiss government became part of the wave of European harm reduction pioneers, implementing a raft of measures including needle and syringe programmes (NSP) and opiate substitution treatment. Indeed, Switzerland pioneered an innovative new model of heroin assisted therapy (HAT) in which long term users who had failed on other programmes were – alongside other forms of psycho-social support – prescribed pharmaceutical heroin which could be injected under medical supervision in a local day clinic. The impressive outcomes on a range of key health and criminal justice metrics has led to similar programmes being launched in other countries including Canada, Germany, the Netherlands and the UK. Evaluation is widely available in many documents and papers on the internet (search using keywords such as “heroin / supply / Swiss / Uchtenhagen”). Ambros Uchtenhagen was the Swiss researcher on drugs and, in particular, on heroin use who provided the first design of the intervention⁶. A summary can be found in Strang et al. (2012).

Uruguay (licensed sales): In 2013, Uruguay became the first state to pass legislation to legalise and regulate cannabis for non-medical uses. The Uruguayan model involves a greater level of government control than the more commercial models in the US states of Washington and Colorado. Under the control of a newly established regulatory body, only production of specified herbal cannabis products by state-licensed growers is permitted. Sales are permitted only via licensed pharmacies, to registered adult Uruguayan residents – at prices set by the new regulatory body. There is a complete ban on all forms of branding, marketing and advertising, and tax revenue will be used to fund new cannabis risk education campaigns. Limited home-growing is also allowed.

Suggestions for cocaine regulation

In order to choose the cocaine legalisation approach among those reported above, it is necessary to consider all the results of behaviour and health studies on cocaine consumption. Interesting results have been obtained by studies on self-regulation of cocaine users. These were presented at the Eighth International Society for the Study of Drug Policy (ISSDP) Conference in 2014 in Rome, in particular by Zuffa and Ronconi (2015). These important studies need to be extended and repeated when cocaine is legalised to monitor legalisation approach and, possibly, introduce some modifications to improve efficacy.

The information coming from the analysis of health consequences shows that some health consequences derive also for non-problematic cocaine users, as reported in **Chapter 2** in particular:

⁶ A plenary exhaustive session in Prague Conference in 2010, chairperson Ambros Uchtenhagen, that is available online: <http://www.urbandrugpolicy.com/en/catalogue/detail/6/152/>

“Direct somatic health consequences due to the vasoconstrictive characteristics of cocaine are cardiovascular problems including stroke and myocardial infarction. Characteristics of cocaine that are directly toxic to cells lead to necrosis of the skin, soft tissue, and cartilage, primarily related to inhalation of cocaine.”

Consequences of this kind were observed in the studies on mortality and hospitalisation data presented at the Eighth ISSDP Conference in 2014 in Rome, in particular by Burgio et al. (2015) and Grippo et al. (2015). These studies should likewise be extended and conducted in other countries and situations, in particular to monitor the positive and negative effects of cocaine regulation.

Much worse health consequences derive directly from prohibition. Traffickers and, in particular, dealers supply illegal cocaine highly adulterated with substances that generate serious damage, as quality control is not available for illegal cocaine.

These considerations on users' behaviour and health consequences and the toxicological studies by van Amsterdam et al. (2010, 2013) and Nutt et al. (2007, 2010),⁷ where the cocaine toxic score is higher than amphetamine but lower than alcohol and heroin, suggest that the licensed sales option, as described above, should be chosen for cocaine. The considerations that suggest this approach come also from various studies on consumption and health. From toxic analysis the effects of cocaine use are rather similar to alcohol, which may be benign or toxic depending on the kind of beverage and quantity. Once legalised, both prevention and rehabilitation can be improved. Cost regulation reduces profits from illegal goods and quality control reduces the health consequences.

An important general result on alcohol consumption behaviours shows that it is less harmful in the producer countries (for instance Mediterranean countries) than in the solely consumer countries (Sweden is an example), due to the cultural framework. This suggests a similar regulation for cocaine, which will need to be correctly evaluated by monitoring in future years.

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⁷ The drug ranking methodology used by Nutt et al. has been criticised by Rolles and Measham (2011). In particular they argue that: *“The delphic methodology used is highly vulnerable to subjective judgements and even the more robust measures, such as drug related death and dependence, can be understood as socially constructed. The failure of the model to disaggregate drug use harms from those related to the policy environment is also highlighted. Beyond these methodological challenges the utility of single figure index harm rankings is questioned, specifically their role in increasingly redundant legal frameworks utilising a harm-based hierarchy of punitive sanctions. If analysis is to include the capacity to capture the complexity relating to drug using behaviours and environments; specific personal and social risks for particular using populations; and the broader socio-cultural context to contemporary intoxication, there will need to be acceptance that analysis of the various harm vectors must remain separate – the complexity of such analysis is not something that can or should be over generalised to suit political discourse or outdated legal frameworks.”* This assertion is valid of course but does not consider that in the same period van Amsterdam et al. made a similar analysis to rank substances, independently and using a different Delphi approach, and derived a quite similar ordering of substances. Ranking substance harm is quite important to evaluate and compare drug policy effects and positive or negative consequences collectively for different user populations and is accepted at international level, as shown, for example, in Mammone et al. (2014) and reported above.

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